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VOL. 7 No. 48 NOVEMBER 29, 1957

Cooperative ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION
AGRICULTURAL RESEARCH SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

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PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

Volume 7 November 29, 1957 Number 48

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

EUROPEAN CHAFER caused considerable lawn damage in Syracuse, New York. (p. 895).

SPOTTED ALFALFA APHID continues active in areas of Kansas. (p. 895).

Fall abundance of APHID eggs on overwintering hosts of potato-infesting aphids in northeastern Maine. (p. 897).

PINK BOLLWORM survey report. (p. 897).

JACK-PINE BUDWORM defoliation survey in Minnesota. (p. 900).

Notes on illustrations for field separation of FIRE ANTS. (p. 901).

Status of IMPORTED FIRE ANT (distribution map). (p. 902).

INSECTS not known to occur in the United States. (p. 903).

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Reports in this issue are for the week ending November 22 unless otherwise designated.

WEATHER OF THE WEEK ENDING NOVEMBER 25

Western sections of the southern Great Plains with heavy snows and unseasonably cold temperatures captured the weather headlines of the week. As strong northerly winds intermixed cold air with the warm moist conditions of the South, 5 to 6 inches of snow fell in eastern New Mexico and 2 to 4 inches in the Texas and Oklahoma Panhandles on Thursday. Snowfalls of up to 5 or more inches in western and northern Texas on Friday, extended southward as far as Laredo, Hondo, and Austin by Saturday night. Following the snow, daily minimum temperatures and record lows for so early in the season were equalled or exceeded at several locations, and subzero readings of-1° were observed at both Lubbock and Dalhart, Tex., on the 23rd. An extensive storm center moving out of the country over the Lakes region early in the week, lingered over the Hudson Bay area of Canada to bring generally light snows and significant rains to the northerly sections of the East. Snowfalls of 10 to 16 inches were observed with this storm passage on the 18th and 19th in southeastern Minnesota and northern and western sections of Wisconsin and Michigan. The circulation of this storm brought a 6-to 12-inch snowfall to a small area south of Buffalo, N. Y., and Erie, Pa. on the 21st. During the latter part of the period, a Gulf storm brought the heaviest rains of the week to the area from eastern Texas and southeastern Oklahoma to the Atlantic coast, and lowland flooding was reported in some areas. Precipitation totals for the week were moderate to heavy in eastern Texas, throughout Louisiana, along the Mississippi River and from there eastward. The main exception being central Florida where amounts were light. Little or no precipitation was observed in southern California, western Arizona, and eastern Montana. Weekly temperatures averaged near to above normal along the California coast, in Montana and the Dakotas, and east of a line extending from Pensacola, Fla., to Sault St. Marie, Mich. Departures of-6° were common throughout the southern and central Plateau, Rocky Mountains, and Plains States, with a-13° departure observed in western Texas. The greatest plus departure was a +11° in northern Montana, with +6° or more observed in New England and Florida. Extremely low temperatures were recorded in western mountain sections early in the week, such as,-24° at West Yellowstone, Mont., and Alamosa, Colo., and-35° at Fraser, Colo., but extensive warming had taken place by the end of the period. Severe Santa Ana winds in southern California on the 21st dried vegetables and topsoil, caused local damage to crops, trees, electrical lines, and homes, and fanned forest fires which burned over an estimated 28,000 acres in the San Gabriel Mountains. Small streams and lakes in Minnesota are reported to be ice covered. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - OKLAHOMA - Six larvae taken from 450 stalks of late, irrigated corn at Stillwater. (Arbuthnot). None found in 150 plants examined in Carter County and 100 in Oklahoma County. (Coppock). KANSAS - The percent infestation during fall abundance survey ranged from 58.4 percent in Nemaha County to 90 percent in Doniphan County and the number of borers per 100 stalks ranged from 75 in Nemaha to 591 in Doniphan County. The infestation levels and number of borers per 100 stalks are considerably higher than in 1956 in northeastern area. (Matthew).

SOUTHWESTERN CORN BORER (*Zeadiatraea grandiosella*) - OKLAHOMA - No overwintering larvae found in 150 corn plants examined in Carter County. Seven plants infested with 8 larvae (4 dead, 4 live) of 100 examined in Oklahoma County. (Coppock).

GRASSHOPPERS - OKLAHOMA - A few *Melanoplus differentialis* and *M. bilituratus* remain in roadsides and field margins in southern counties. Numbers approximate one per square yard or less. (Coppock).

APHIDS - SOUTH CAROLINA - Causing considerable damage to small grains, mainly oats, in Horry County, and "yellows" noted on small grains in Anderson and Greenville Counties. (Nettles et al.). NORTH CAROLINA - Reports of severe infestations on fall-seeded grain crops. (Insect Notes). OKLAHOMA - Common on roadside clover in Marshall County; 30-70 per 10 sweeps. (Coppock).

GREENBUG (*Toxoptera graminum*) - SOUTH CAROLINA - Collected on oats in Edgefield County. Det. E. W. King. (Nettles et al.). KANSAS - None found in any wheat fields surveyed in 18 central and western counties. (Matthew, Nov. 15).

BROWN WHEAT MITE (*Petrobia latens*) - KANSAS - None found in wheat fields surveyed in 18 central and western counties. (Matthew, Nov. 15).

EUROPEAN CHAFER (*Amphimallon majalis*) - NEW YORK - During latter part of October, *A. majalis* grubs were discovered in a lawn area at New York State Experiment Station at Geneva. Treatment planned immediately. Considerable lawn damage occurred in Syracuse. (PPC, East. Reg., Oct. Rept.).

RHODES-GRASS SCALE (*Antonina graminis*) - CALIFORNIA - Four new infestations in Imperial County, three in El Centro and one in Holtville, all on St. Augustine grass. (Cal. Coop. Rept.).

POTATO LEAFHOPPER (*Empoasca fabae*) - KANSAS - Counts in alfalfa in Cloud County averaged about 65 per 100 sweeps, both adults and nymphs present, and in Gray County counts of adults were 12 per 100 sweeps. (Matthew, Nov. 15).

TARNISHED PLANT BUG (*Lygus lineolaris*) - OKLAHOMA - Generally 0-4 per 10 sweeps in southern alfalfa fields. (Coppock).

RAPID PLANT BUG (*Adelphocoris rapidus*) - ALABAMA - Considerable numbers present in vetch in Lee County. (Guyton).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - OKLAHOMA - Population remains low in State. Counts generally from 0-20 per 10 sweeps in south central area. (Coppock). ARIZONA - Almost non-existent in Yuma area since heavy rains of October 28. Prior to that time, it was occurring in abundance, damaging some fields and stands of new alfalfa. (Ariz. Coop. Rept.). KANSAS - Found in all alfalfa fields examined in Clay, Cloud, Mitchell, Osborne, Rooks and Ottawa Counties in north central area; Graham County in northwest; Trego, Gove, Logan and Scott in west central; Finney, Gray and Ford in southwest; and Edwards, Pawnee, Barton, Rice, McPherson and Saline in central area. Heaviest counts found in north central counties and ranged from 15 to 300 aphids per 25 sweeps. Elsewhere populations non-economic. (Matthew, Nov. 15). UTAH - *T. maculata* and *Macrosiphum pisi* caused 25 percent loss to third crop alfalfa in area of Emery Co. (Knowlton).

PEA APHID (Macrosiphum pisi) - ALABAMA - Causing light damage to vetch in Lee County. (Guyton). KANSAS - Found in several alfalfa fields in Cloud, Mitchell, Osborne and Rooks Counties. Counts ranged from 14 to 30 per 25 sweeps. (Matthew, Nov. 15).

SOYBEAN CYST NEMATODE (Heterodera glycines) - Negative inspections were made on 19 properties in Baldwin County, ALABAMA; 4,615 acres in Craighead, Crittenden and Poinsett Counties, ARKANSAS; northwestern FLORIDA: 5 counties in GEORGIA; and in Bolivar, De Soto, Coahoma, Tunica and Washington Counties, MISSISSIPPI. Inspections were made in Camden, Pender and New Hanover Counties, NORTH CAROLINA, resulting in the finding of three properties totaling 76 acres in New Hanover County and one property in Pender County totaling 7 acres infested with soybean cyst nematode. (PPC Sou. Reg., Oct. Rept.).

FRUIT INSECTS

MEDITERRANEAN FRUIT FLY (Ceratitis capitata) - In eastern area of MEXICO, 250 traps were set out in strategic locations. At close of October, all traps were inspected with negative results. (PPC, Mex. Reg.). Traps in operation ALABAMA, LOUISIANA, MISSISSIPPI, and TEXAS were checked twice during October; results negative. Trapping in Chilton County, Alabama and Texas was suspended during October. (PPC, Sou. Reg.)

MEXICAN FRUIT FLY (Anastrepha ludens) - MEXICO - Total of 1,084 traps were operated in States of Baja California and Sonora with negative results. (PPC, Mex. Reg., Oct. Rept.). CALIFORNIA - No adults taken in State since July and none in Baja California, Mexico, since August, 1957. There have been 114 specimens trapped during June, July and August (eight on California side of line) compared with 48 trapped during 1954-55-56 (four in California). Of the total of 162 adults trapped, 152 were collected during the interval June through September. In the continued absence of an established infestation, the mango shipping season, April to October, remains the crucial period with respect to fly introduction and establishment. It is proposed that treatment activities be discontinued during the winter months, mid-December to mid-March, and that trap complements on both sides of the border be increased to more accurately measure the presence or absence of fly specimens in the area. (Harper, Nov. 1). TEXAS - During first week of October, 2,184 traps were placed in operation in five counties from Cameron County on the Gulf of Mexico to Webb and Dimmit Counties. Hidalgo County had the greater number of traps in operation, with total of 1,400 located on 78 properties. All traps inspections during October were negative. (PPC, Sou. Reg.).

CITRUS BLACKFLY (Aleurocanthus woglumi) - MEXICO - In northeast Mexico, 196,120 citrus trees were inspected on 3,672 properties with 164 trees found infested on 24 properties. Infested properties were found in Municipio of Hidalgo in State of Tamaulipas and in vicinities of Montemorelos, Haulahuises and Linares in State of Nuevo Leon. All infestations light. Inspections in Nuevo Laredo, Tamaulipas, and Monterrey, Nuevo Leon, were negative. In western Mexico, 14,319 trees were inspected on 520 properties in Sonora and Baja California with negative results. (PPC, Mex. Reg., Oct. Rept.).

BURROWING NEMATODE (Radopholus similis) - FLORIDA - During October, 23 citrus groves, 5 nurseries and 2 miscellaneous properties were found infested for the first time. Eight nurseries were treated by the hot water method and seven groves, with total of 44 acres, were treated because of spreading decline. (PPC, Sou. Reg.).

Citrus Insect Situation, Lake Alfred, Florida - Activity of PURPLE SCALE continued to increase this week with some further increase expected. The average infestation is increasing rapidly. FLORIDA RED SCALE activity increased this week and little change is expected in the next week or two. CITRUS RED MITE activity increased this week and further increase is expected. Activity of CITRUS RUST MITE increased sharply this week and is at very high level. The level will remain high for several weeks. TEXAS CITRUS MITE infestations continue to increase. (Pratt, el al. Nov 19).

TEXAS LEAF-CUTTING ANT (*Atta texana*) - TEXAS - Active in plum orchard in Houston County. (Turney).

TRUCK CROP INSECTS

Fall Abundance of Aphid Eggs on Overwintering Hosts of Potato-infesting Aphids in Northeastern Maine. A survey was made November 4 to 7 to determine abundance of eggs of three species of potato-infesting aphids in northeastern Maine on their more important primary hosts. Fully distended, presumably viable, eggs of buckthorn aphid (*Aphis abbreviata*) were found on alder buckthorn at all eight sampling stations. Abundance of viable eggs now is 83 percent of the 10-year fall average, or 50 percent of that one year ago, and 77 percent of the deposited eggs had shriveled as compared with 72 percent in 1956. Large populations of buckthorn aphid could result on the 1958 potato crop. Aphid eggs on Canada plum-a primary host of green peach aphid (*Myzus persicae*) - were found at 20 of the 26 sampling stations. Overall abundance of eggs were about 1½ times that of the 10-year fall average. The warm, late fall permitted deposition of eggs on this plum over a longer than usual period, and consequently the number of eggs per female averaged well above normal. Although periodic counts disclosed fall aphid populations on plums to be about the same in 1957 as in 1956, the present egg population is 4.6 times as great as the same time in 1956. Present prospects favor increased relative and actual abundance of *M. persicae* in northeastern Maine during 1958. Aphid eggs on swamp rose - most important primary host of potato aphid (*Macrosiphum solanifolii* - were found at all 12 sampling stations. Total egg abundance was 88 percent of the 10-year fall average, with an average of 17.8 percent shriveled at the time of the survey as compared to a 10-year average of 11.5 percent. On the basis of aphid prevalence on roses during the periodic fall counts, viable eggs of potato aphid likely now are about 14 percent more abundant than at same time in 1956, when they were 70 percent of the 10-year average. Although potato aphid comprised a slightly smaller proportion of the total fall population on rose than a year ago, the presently indicated greater abundance of potato aphid eggs is attributed to a larger total aphid population on roses during the current fall and to larger number of eggs per female during the unusually long deposition period in the fall of 1957. Damaging numbers of potato aphid have been observed to develop on potatoes during some seasons when fall aphid egg populations on swamp rose were no larger than those now present. Furthermore, evidence shows that Canada plum at present is much more important than usual as a primary host of potato aphid. (Shands, Simpson, Wave; in cooperation with Maine Agricultural Experiment Station).

YELLOW-MARGINED LEAF BEETLE (*Microtheca ochroloma*) - ALABAMA - Causing considerable damage to turnip tops in Butler County. (Guyton).

COTTON INSECTS

PINK BOLLWORM (*Pectinophora gossypiella*) - MEXICO - In State of Sonora 1,502 bushels of gin trash were inspected and 38 lint cleaner inspections made. Two specimens collected were negative. (PPC. Mex. Reg., Oct. Rept.). LOUISIANA - Quarantine restrictions were removed from Lincoln and Union Parishes on October 24, and at same time Iberia, Lafayette and St. Martin Parishes were placed under State regulation. From 22 parishes, 3,495 bushels of gin trash were inspected with negative results, and 625 lint cleaner inspections were made with negative results. Two pink bollworms were taken from green bolls in Lafayette Parish. TEXAS - Total of 396 pink bollworm were found in 378 bushels of gin trash in 15 counties; 1,169 lint cleaners were inspected with 22,195 pink bollworms found in 77 counties; 28 gin stands were inspected, with 52 pink bollworms found in 5 counties; approximately 4,734 green bolls examined with 927 pink bollworms found in 30 counties; inspections of dry bolls totaled 68 with 8 pink bollworms found in one county; and bloom inspections totaled 2,550 with 41 pink bollworms found in one county. MISSISSIPPI - Intensive inspections of gin trash at gins in Walthall and Pike Counties were negative.

FLORIDA - In Monroe County, 153 pink bollworms found in 3,730 hibiscus blooms. All Positive finds in previously known infested plantings on Plantation Key. Inspections of 3,507 hibiscus blooms in Dade County were negative. (PPC, Sou. Reg., Oct. Rept.). OKLAHOMA - One larva recovered from survey of 2 lint cleaners and 8 gin stands in Stephens, Haskell, Coal, Hughes and McIntosh Counties during first two weeks of November. (Fed.-State P.B.W. Comm.). CALIFORNIA - Survey of green bolls in Imperial County approximately one-half completed; over 6,000 bolls examined to date with no evidence of infestation. (Cal. Coop. Rept., Nov. 22).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

SMALLER EUROPEAN ELM BARK BEETLE (*Scolytus multistriatus*) - KANSAS - Found on elm logs at Garden City, Finney County. This extends known distribution further westward across State. (Matthew, Nov. 14).

A SCALE (*Chrysomphalus bifasciculatus*) - MARYLAND - Heavily infesting leaves of Chinese holly at Bladensburg. (U. Md., Ent. Dept.).

DOGWOOD TWIG BORER (*Oberea tripunctata*) - TEXAS - Infesting plum trees in Cherokee and Houston Counties. (Turney).

AZALEA BARK SCALE (*Ericoccus azaleae*) - MARYLAND - Infesting azaleas in nursery at Gaithersburg. (U. Md., Ent. Dept.).

JAPANESE BEETLE (*Popillia japonica*) - NORTH CAROLINA - Control program started in Brunswick County. Fifteen of 170 acres to be controlled treated. TENNESSEE - In Johnson, Cocke, Jefferson and Sevier Counties, 193 acres were treated. MISSISSIPPI - Inspections of traps at Greenville Air Force Base and in Gulfport district were negative. (PPC, Sou. Reg., Oct. Rept.).

SPIDER MITES - SOUTH CAROLINA - Infestations heavy on azalea and pyracantha in Edgefield and Dorchester Counties. (Nettles et al.).

TIP MOTHS - TEXAS - Damage extensive throughout eastern area during October. Severe infestations in Houston, Upshur and Walker Counties. (Young).

WHITE-MARKED TUSSOCK MOTH (*Hemerocampa leucostigma*) - SOUTH DAKOTA - Larvae and pupae found on elm trees in Canton vicinity of Lincoln County. (Hantsbarger).

INSECTS AFFECTING MAN AND ANIMALS

CATTLE LICE - OREGON - *Solenopotes capillatus* appearing in moderate numbers on cattle at Heppner, John Day, Long Creek, Hermiston and La Grande between November 4 and 20. No other lice in evidence. (Every). KANSAS - None found on 92 head of cattle examined in Riley County or on 200 head examined in Morris County. (Matthew, Knapp).

EAR TICK (*Otobius megnini*) - OREGON - Inspections of cattle at Heppner, John Day, Long Creek, Hermiston and La Grande, November 4-20, were negative. (Every). KANSAS - Found on 5 percent of 200 cattle examined one location in Morris County. (Knapp).

SCREW-WORM (*Callitroga hominivorax*) - NORTH CAROLINA - Has been more abundant in State than any year since 1949. (Insect Notes).

CHICKEN PESTS - ALABAMA - Considerable number of *Menacanthus stramineus*, *Cuclotogaster heterographus* and *Ornithonyssus sylviarum* on laying hens in Lee County. (Guyton).

CATTLE GRUBS (Hypoderma sp.) - SOUTH CAROLINA - Appearing in cattle. In Saluda County, 20 percent of Hereford brood cows infested; averaging 0.32 grubs per cow. (Adkins). KANSAS - Counts of infested cattle were 1 per 200 animals in Morris County to 3 per 92 animals at Manhattan, Riley County. (Knapp, Matthew).

YELLOW-FEVER MOSQUITO (Aedes aegypti) - FLORIDA - Larvae collected at Key West, Monroe County. (Hill, Guion, Albert; Nov. 13). First collection in area since November 1948. (H. Denmark).

BENEFICIAL INSECTS

PREDATORS - OKLAHOMA - Nabids 0-2 per 10 sweeps, and lady beetle populations low, 0-4 per 10 sweeps, in alfalfa fields in southern area. (Coppock).

STORED PRODUCTS INSECTS

KHAPRA BEETLE (Trogoderma granarium) - Total of 131 visual inspections were made on 129 properties in Baja California, MEXICO. Determinations of submitted specimens were negative. Of 320 trap inspections made in States of Baja California and Sonora, only one specimen was collected and submitted for identification. At the close of October, there were no known infestations remaining in Mexico. (PPC, Mex. Reg., Oct. Rept.). All specimens collected in ALABAMA, GEORGIA and FLORIDA during October were negative. (PPC, Sou. Reg.). One reinfestation found in storage area in Riverside County, CALIFORNIA, through use of traps. Inaugurated about six months previously these traps consist of a bunched muslin square placed in warehouses or lowered into grain elevators and are examined periodically. (Cal. Coop. Rept.).

STORED GRAIN INSECTS - SOUTH DAKOTA - Infestations of saw-toothed grain beetle and flat grain beetle reported from stored oats in Sully County. (Hantsbarger). UTAH - Fumigations of storage buildings occurring in Millard, Juab and other counties. (Knowlton).

MISCELLANEOUS INSECTS

A CERAMBYCID (Sternoplistes temmincki) - CALIFORNIA - Five collections of this oriental species have been made from bamboo poles (used in harvesting walnuts) and originating in India and Japan since mid-August. Collection sites are in San Joaquin (2), Stanislaus, Contra Costa and Merced Counties. This insect has not been found established in the State. (Cal. Coop. Rept., Oct. Rept.).

TERMITES - UTAH - Number of infestations reported recently in Salt Lake and Logan Counties. Severely damaging a home in Logan, Cache County. (Knowlton).

LARGER YELLOW ANT (Lasius interjectus) - MARYLAND - Causing a nuisance about homes in Baltimore and Carroll Counties. (U. Md., Ent. Dept.).

PIGEON TREMEX (Tremex columba) - SOUTH DAKOTA - Adults flying in Gary vicinity of Deuel County. (Hantsbarger).

IMPORTED FIRE ANT (Solenopsis saevissima richteri) - FLORIDA - Extension of find nine miles southwest of Lutz, Hillsborough County. (Bittner, Nov. 15).

WINTER GRAIN MITE (Penthaleus major) - MARYLAND - Found on outside of home at Hanover, November 7. Det. E.W. Baker. (U. Md., Ent. Dept.).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. orn.	Perid. marg.	Laphyg. frug.	Heliothis zea	Feltia subter.
FLORIDA							
Gainesville 11/19		1					
Sanford 11/13	3	2				3	16
Quincy 11/12	7	9				2	
NEBRASKA (Counties)							
Lincoln 11/8-14	129	67		23			
Perkins 10/14-11/2	89	23		8		13	
SOUTH CAROLINA (Counties)							
Oconee 11/16-22	8	3	2	1			1
Charleston 11/18-24	5	3			1	1	4
Florence 11/16-22	21	5	5	2	8	12	41
TEXAS							
Brownsville 11/10-16	26	2	8		95	8	30
Beaumont 11/1-15	31	61	10				57

ADDITIONAL NOTES

MINNESOTA - Survey of JACK-PINE BUDWORM conducted in Park Rapids - Bemidji area. Current defoliation, top kill and tree mortality were of major concern. It is evident so far that damage was severe in isolated areas. The new areas of defoliation show an increased acreage damaged by jack-pine budworm. (Minn. Ins. Rept.).

NOTES AND ILLUSTRATIONS FOR FIELD SEPARATION OF FIRE ANTS

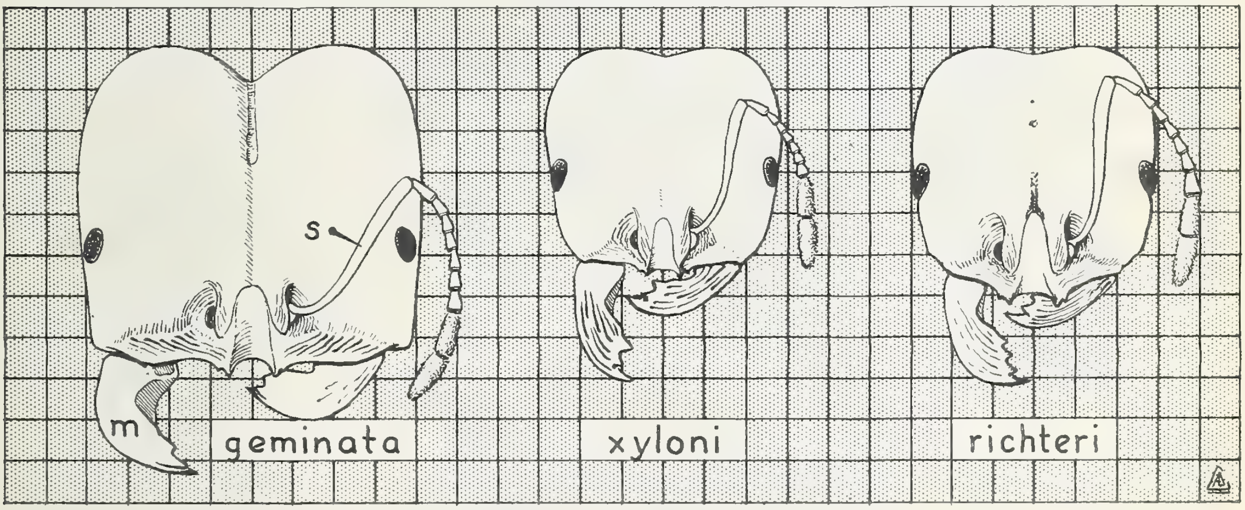
The following illustrations have been prepared to assist field personnel in making gross examinations of the very largest workers, the ones that usually do not have wings, of *Solenopsis geminata* (F.) (tropical fire ant); *Solenopsis xyloni* McCook (southern *fire ant*) and *Solenopsis saevissima richteri* Forel (imported fire ant).

All three of these forms build mounds, but it is impossible to determine the species from the mound alone. These mounds are most commonly found in open places, such as roadsides, fencerows, railroad right-of-ways, open woods, pastures, margins of cultivated fields, edges of streams, around ponds and high areas in moist places.

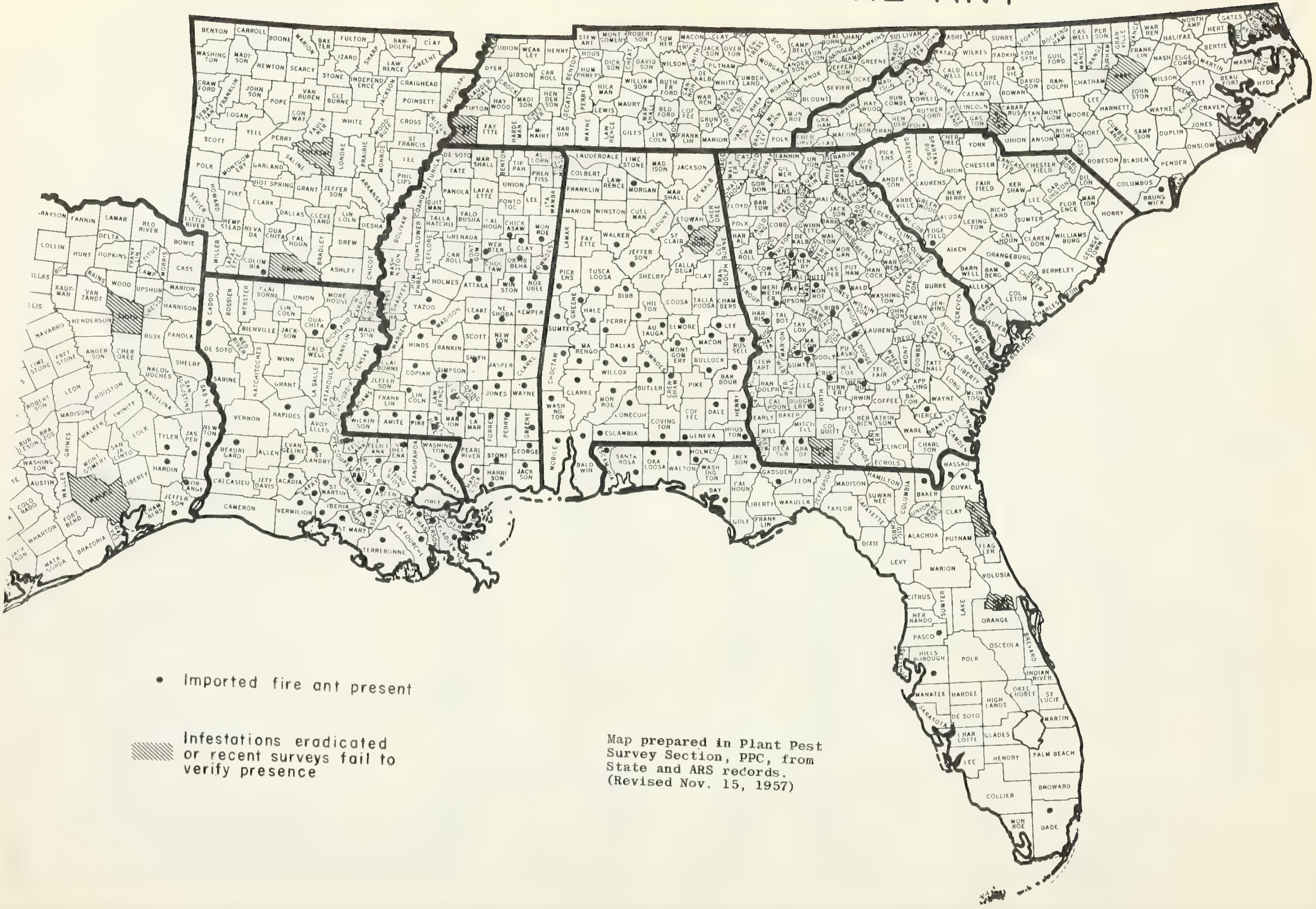
S. geminata (F.) -- The largest workers of this species have unusually large heads *which are* out of proportion to the rest of the body and can be readily seen with the naked eye. Because usually less than one percent of the colony are major workers, a very careful examination of the mound is necessary to find them. The illustration is an outline drawing; the mandibles are usually darker than the rest of the body, incurved and usually without pronounced teeth.

S. xyloni McCook and *S. saevissima richteri* Forel -- The separation of *xyloni* and *richteri* is very *difficult* and positive identification should not be made in the *field.*

Note the illustrations: *Xyloni* has a noticeably shorter scape. (The scape or first segment is that portion of the antenna which is unusually long and attached to the head.) The scape of *richteri* is noticeably longer. The mandible of the largest worker of *xyloni* is *usually* three-toothed. (Sometimes an irregular projection appears *above these* three teeth.) In *richteri* the mandible of the largest worker is rather distinctly four-toothed. (ENT and PPC, ARS) CEIR 7 (48) 11-29-57



STATUS OF IMPORTED FIRE ANT


● Imported fire ant present
▨ Infestations eradicated or recent surveys fail to verify presence

Map prepared in Plant Pest Survey Section, PPC, from State and ARS records. (Revised Nov. 15, 1957)

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

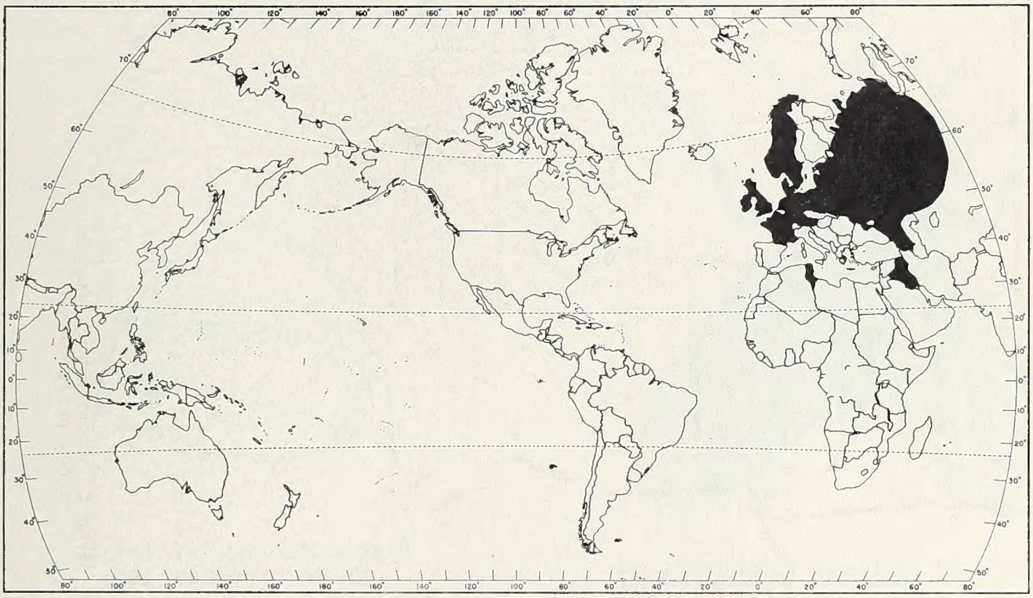
WHEAT BULB FLY (*Hylemya coarctata* Fallen)

Economic Importance: Larvae of this muscid caused an estimated minimum loss of about 1,200,000 pounds sterling on wheat in England in 1953. The infestations were responsible for reseeding of 59,000 acres and partial replanting of an additional 58,000 acres. Another 85,000 acres were affected to various extents. Large outbreaks, involving from 12 to 44 percent of wheat stems, occurred in Russia in 1913. Wheat, rye and sometimes barley are damaged in several other European areas. Outbreaks in Denmark tend to be more severe when winters are mild and damage in England and Scotland is usually found in areas with less than 30 inches of annual rainfall.

Damaged Wheat Plant

Distribution: Occurs in Austria, Denmark, France, Germany, Poland, Netherlands, Norway, Sweden, USSR (European and eastern Siberia) and the British Isles. There are also records from Tunisia and Iraq.

Hosts: Winter wheat is chief cultivated host but will attack winter rye and barley. Oats are not attacked. Among wild hosts, quackgrass is preferred in England.

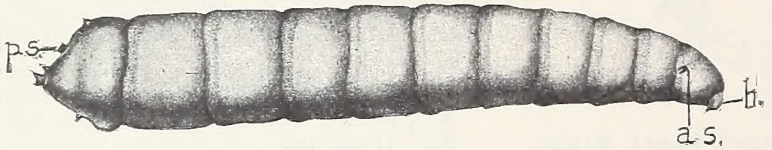


General Distribution of Wheat Bulb Fly

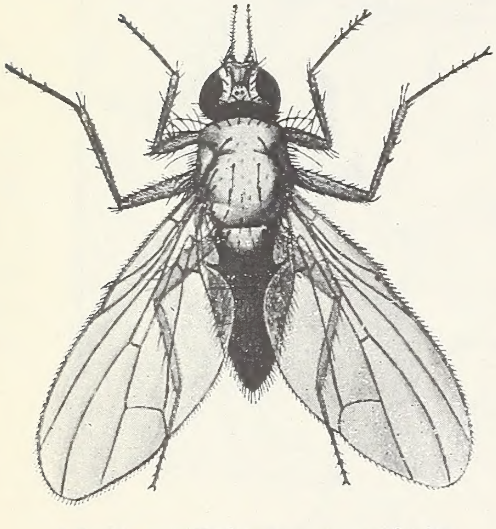
(Muscidae, Diptera)

Life History and Habits: The fly has one generation a year generally. In England eggs are laid in summer and hatch in late January or early February. Larvae enter the wheat stem through the basal node, usually causing decomposition and discoloration within 24 hours. They settle in the central hollow of shoot just below ground level though they may occur above ground later. The larvae begin to leave the plants by last of April and usually pupate by mid-May. One larva may attack 6 or more plants, the third instar being able to travel 18 inches. Adults emerge from June through early August, with the peak emergence about mid-June. Females deposit around 22 eggs, which are laid singly in groups of 2 or 3, immediately below or on the surface of loose soil.

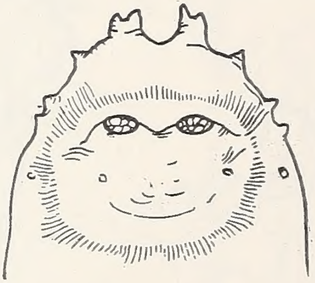
Description: Adult male thorax ochreous gray with some indeterminate black markings, sides lighter. Abdomen narrow, darker than thorax, hairy with some obscure transverse striae and a faint interrupted dorsal stripe. Wings yellowish, with narrow yellowish-brown veins. Halteres pale; costal spine small. Legs black; tibiae piceous. Thorax and abdomen of female without markings; legs with four posterior femora and all tibiae pale. Length 6-8 mm. Eggs creamy white, slightly concave, pointed one end, flattened at other. Fine longitudinal surface markings in form of ridges and curves which run into one another. Length 1.8 mm. Newly hatched larva differs from later instars by having two pairs of unserrated cephalic hooks, one pair above the other; the more mature larva has one pair of serrated cephalic hooks. Anterior spiracles possess 7-8 undivided papillae. The caudal end is truncated and beveled dorso-ventrally, and has a characteristic arrangement of spines. Length 20 mm. There are three larval instars. Puparium is typical of the Muscidae. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies.) CEIR 7 (48) 11-29-57



Larva



Adult of Hylemya coarctata



Caudal Corona of Larva
showing Tubercles

Figures (except map): Larva and damage from Smith, K. M. 1948. A Textbook of Agricultural Entomology. 289 pp., Cambridge (Gt. Britain). Adult from Rostrup, S. and Thomsen, M. 1931. Die Tierischen Schadlinge des Ackerbaues. 367 pp., Berlin.